REMARKS

I. INTRODUCTION

Claims 1 and 4-40 are pending in the present application. In a December 21, 2007, Office Action (hereinafter "Office Action"), Claims 1-40 were rejected. The Office Action rejected applicants' Claims 1-16, 19, 23-27, and 37-40 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,982,362, to Crater et al. (hereinafter "Crater"), in view of U.S. Patent No. 6,085,227, to Edlund et al. (hereafter "Edlund"). Additionally, the Office Action rejected applicants' Claim 17 under 35 U.S.C. § 103(a) as obvious over Crater, in view of Edlund, and further in view of U.S. Patent No. 6,698,021, to Amini et al. (hereinafter "Amini"). Claims 18 and 20 were rejected under 35 U.S.C. § 103(a) as being obvious over Crater, in view of Edlund, Amini, in view of U.S. Patent No. 5,732,232, issued to Brush, II et al. (hereinafter "Brush"). Claims 21 and 28 were rejected under 35 U.S.C. § 103(a) as being obvious over Crater, in view of Edlund, and further in view of U.S. Patent No. 6,504,479, issued to Lemons et al. (hereinafter "Lemons"). Claim 22 was rejected under 35 U.S.C. § 103(a) as being obvious over Crater, in view of Edlund and further in view of U.S. Patent No. 5,758,340, issued to Nail (hereinafter "Nail"). Claims 29-31 and 35-36 were rejected under 35 U.S.C. § 103(a) as being obvious over Crater, in view of U.S. Patent No. 6,499,054, issued to Hesselink et al. (hereinafter "Hesselink"). Claims 32 and 34 were rejected under 35 U.S.C. § 103(a) as being obvious over Crater, in view of Hesselink and further in view of Lemons. Claim 33 was rejected under 35 U.S.C. § 103(a) as being obvious over Crater, in view of Hesselink, and further in view of U.S. Patent No. 5,086,385, issued to Launey et al. (hereinafter "Launey"). For at least the following reasons, applicants respectfully submit that Claims 1 and 4-40 are non-obvious over the cited references because the cited references, alone or in combination, fail to teach certain claim elements in the pending claims.

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II. THE CLAIMS DISTINGUISHED

Claims 1, 29, and 37

For purposes of this discussion, independent Claims 1, 29, and 37 of the present application will be discussed together because the reasoning is similar. Claim 1 recites the following:

> 1. A method for interacting with a remote device comprising:
>
> obtaining a request corresponding to controlling the remote device;
>
> generating a graphical user interface responsive to said request, the graphical user interface being operable to control the remote device, wherein controlling said remote device includes accessing said remote device and dynamically issuing instructions to manipulate an operation of the remote device and wherein dynamically generating a graphical user interface includes identifying a remote device corresponding to said request and selecting a program module corresponding to said identified remote device from a plurality of program modules, said program module operable to control said remote device;
>
> obtaining user control instructions from said graphical user interface for controlling the remote device, wherein the user control instructions for controlling the remote device are submitted by one authorized user at a time;
>
> transmitting remote device control data corresponding to said user control instructions submitted by one authorized user at a time; and
>
> obtaining remote device data generated by said remote device in response to receipt of said remote device control data.

Similarly, Claim 29 recites the following:

> 29. In a computer system including a client device in communication with a central server via a communication network, a method for dynamically generating a graphical user interface for controlling at least one pre-selected remote device comprising:
>
> obtaining a request to control at least one pre-selected remote device from the client device by a central server and selecting one or more program modules from a plurality of program modules in response to said request and corresponding to said request to control the at least one pre-selected remote device, said one or more program modules operable to control said remote device; and

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transmitting a screen interface with said one or more program modules, wherein said screen interface containing said one or more program modules is operable to generate a graphical user interface for controlling at least one pre-selected remote device when loaded within a browser application on the client device, wherein controlling includes accessing the at least one pre-selected remote device and dynamically issuing instructions to manipulate an operation of the at least one pre-selected remote device.

Similarly, Claim 37 recites the following:

37. A system for dynamically generating a user interface for controlling at least one remote device comprising:

at least one remote device operable to receive control commands and to transmit monitoring data based on said control commands;

a server computer in communication with said remote device, said server computer operable to dynamically generate a graphical user interface for controlling said remote device, wherein the remote device is controlled by one authorized user at a time;

a client computer in communication with said server computer, said client computer operable to display said graphical user interface, and request said control commands for controlling said remote device, wherein controlling includes accessing the remote device and dynamically issuing instructions to manipulate an operation of the remote device.

As amended, each of the independent Claims 1, 29, and 37 recites using a program module to control a remote device when the graphical user interface is accessed. More specifically, Claim 1 in the pending claims recites "selecting a program module corresponding to said identified remote device from a plurality of program modules, said program module operable to control said remote device." Similarly, Claim 29 recites "obtaining a request to control at least one preselected remote device from the client device by a central server and selecting one or more program modules from a plurality of program modules in response to said request . . . said one or more program modules operable to control said remote device." Moreover, Claim 37 recites "wherein controlling includes accessing the remote device by selecting a program module on the client computer that is associated with the remote device and dynamically issuing instructions to manipulate an operation of the remote device."

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The Office Action alleges that Crater provides systems for controlling a remote device. Office Action at pages 2-4. In this regard, Crater is purportedly directed to a video interface for monitoring equipment states for the purpose of detecting malfunctions in industrial controls. To this end, Crater describes a remote processing architecture that enables one or more of the remote computers to download data and associated instructions from one or more hardware-based programmable controllers that are associated with the industrial controls. In contrast to recited elements of the claims, Crater utilizes hardware-based controllers to access data from remote devices. This aspect of Crater is reflected in the specification which states:

> The present invention utilizes the capabilities of the Internet and, more particularly, the interactive capabilities made available by resources such as the World Wide Web to shift the burden of providing user interfaces for changing forms of data from monitoring computers to the controllers that actually gather and report the data. By combining data with functionality for displaying that data at the individual controller sites, the need to equip monitoring computers with specialized graphic capabilities is eliminated, along with the need for intensive, ongoing cooperation between engineers responsible for programming controllers and those who configure the computers that perform monitoring.

Controller specific Web pages may be generated to display information obtained by a specific hardware-based controller. This aspect of Crater is reflected in the specification which states:

> In a working system, the network interface 30_1, 30_2, etc. of every controller in the system is constantly active and in communication with network 55, facilitating access by computer 50 to any controller-based web page(s) at any time. In this way, computer 50 can examine the data associated with any controller merely by specifying the appropriate URL of the controller's primary web page.

By describing a system in which hardware-based controllers are used to obtain and present data from a remote device, Crater teaches away from the elements in the independent claims of the present application. In this regard, Claims 1, 29, and 37 of the present application recite selecting a program module that is operable to control said remote device. In contrast,

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Crater is directed to a remote monitoring system that utilizes controllers which combine "data with functionality for displaying the data at the individual controller sites," so that monitoring computers do not have to be equipped with specialized graphics capabilities. Crater at page 10. In contrast, the recited claim elements select a program module at a client computer from a plurality of program modules. Those skilled in the art and others will recognize that hardware-based controllers as utilized by the Crater system are not easily updated once manufactured. As a result, the system as taught in Crater may not be reconfigured with program modules in instances when the industrial controls need to be reconfigured. In contrast, the recited claim elements utilize program modules to access and control remote devices. Since program modules are being used to access the remote devices, the system provided in the present disclosure may be easily updated without having to replace a hardware-based controller. For example, as newer types of remote devices are developed with potentially different functionality than legacy devices, program modules for accessing these devices and their new functionality may be created and added to the present disclosure. In contrast, Crater utilizes hardware-based industrial controls that would need to be replaced if different types of remote devices were utilized.

Claim 1 of the present application recites "transmitting a remote device control data corresponding to said user control instructions submitted by one authorized user at a time." The Office Action acknowledges that Crater does not teach dynamically issuing instructions to manipulate an operation of the remote device, obtaining user control instructions from said graphical user interface for controlling the remote device, or wherein user control instructions for controlling the remote device are submitted by one authorized user at a time. However, the Office Action asserts that Edlund teaches a system where control instructions are managed so that only a single authorized user may submit the control structures at a time. Applicants assert that Edlund does not teach obtaining user control instructions from a graphical user interface for controlling the remote device, wherein the user control instructions for controlling the remote

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device are submitted by one authorized user at a time. Edlund is purportedly directed to a method, apparatus, and article of manufacture for operating remote devices over wide area networks such as the Internet. In this regard, Edlund states, at Col. 5, lines 11-23:

> When a command from the user is authorized by the user manager 114 and session manager 118 on the proxy server computer 104, the task manager 120 is then invoked. The task manager 120 may translate the command into one or more device 106 dependent sub-commands.
>
> In addition, the task manager 120 stores these commands or sub-commands in a priority queue 126. The priority queue 126 is a temporary data structure for queuing commands before they reach the remote device 106 to ensure that a slow device 106 does not get overloaded with too many commands.

In other words, more than one authorized user can submit control instructions which are queued before submission to the remote device in a manner so as to not overload a slow remote device. In contrast to the system disclosed in Edlund, Claims 1, 29, and 37 in the present disclosure recite "obtaining user control instructions from a graphical user interface for controlling the remote device, wherein the user control instructions for controlling the remote device are submitted by one authorized user at a time."

Whether or not Crater and Edlund are properly combined, Crater and Edlund do not teach, suggest, or describe the foregoing aspects recited in independent Claims 1, 29, and 37. Generally described, under 35 U.S.C. § 103(a), a *prima facie* case of obviousness can be established only if the cited references, alone or in combination, teach each and every element recited in the claim. *In re Bell*, 991 F.2d 781 (Fed. Cir. 1993). Crater and Edlund, alone or in combination, fail to teach or suggest a system and method wherein selecting a program module corresponding to said identified remote device from a plurality of remote devices as opposed to hardware-based controllers. Accordingly, applicants respectfully submit that independent Claims 1, 29, and 37 are allowable in view of the teachings of Crater and Edlund, taken alone or in combination.

Claim 25

Claim 25 recites the following:

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> A computer-readable medium having computer-executable components for dynamically interacting between at least one remote device and a computing device, comprising:
>
> a user interface application operable to dynamically generate a graphical user interface corresponding to the remote device in response to a request for interaction with the remote device, wherein the graphical user interface is operable to obtain user instructions to control the remote device, and wherein the user instructions to control the remote device are submitted by one user at a time;
>
> a device interface application operable to obtain device data from the remote device, and operable to manipulate said data; and
>
> a data transmittal application operable to transmit said data to the computing device, and to facilitate communication between the remote device and the computing device for controlling the functionality of the remote device from the computing device, wherein controlling includes accessing the remote device and dynamically issuing instructions to manipulate the device data from the remote device.

Claim 25 recites using a device interface application operable to obtain device data from the remote device and operable to manipulate data received from the remote device. As described previously with reference to Claims 1, 29, and 37, Crater describes a system in which hardware-based controllers are used to obtain and present data from a remote device. As a result, Crater does not utilize an interface application to obtain data from a remote device. Instead, Crater utilizes hardware-based controllers. Crater at page 10. In contrast, the recited elements of Claim 25 utilize a device interface application to control a remote device. For example, as newer types of remote devices are developed with potentially different functionality, the device interface application recited in Claim 25 may be updated to be used in conjunction with these devices. In contrast, Crater utilizes hardware-based industrial controls that would need to be replaced if different types of remote devices were utilized. Accordingly, applicants submit that Claim 25 is also in condition for allowance.

Claims 4-22, 26-28, 30-36, and 38-40

Claims 4-22, 26-28, 30-36, and 38-40 depend on independent Claims 1, 25, 29, and 37, respectively. Moreover, Claims 23-24, are computer-readable media and computer system claims

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with elements that parallel independent Claim 1. As discussed above, Crater and Edlund, taken alone or in combination, fail to teach or suggest certain elements of the independent claims as alleged in the Office Action. Accordingly, for the above-mentioned reasons, Claims 4-22, 26-28, 30-36, and 38-40 are also allowable over the cited references. Additionally, these claims are patentable over the cited references for additional reasons, some of which are discussed in further detail below.

Claim 15

Claim 15 has the additional element of "wherein transmitting data includes manipulating operating parameters of said remote device using said graphical user interface and wherein obtaining remote device data includes obtaining remote device data generated by said remote device based on said manipulated operating parameters." In accordance with one aspect of the present disclosure, data is obtained at a remote device that includes the operating parameters of the remote device. For example, if the remote device is a video camera, the operating parameters may include information regarding whether the video camera is able to perform functions such as, but not limited to, zooming, panning, tilting, and the like. Generally stated, these operating parameters describe the abilities of the remote device. As recited in Claim 15, these operating parameters are obtained and manipulated so that an appropriate graphical user interface may be generated. For example, in order to provide functionality that allows a user to control the remote device, these operating parameters are processed so that the appropriate controls may be presented on the graphical user interface. The Office Action asserts that Crater teaches manipulating operating parameters of said remote device using said graphical user interface and wherein obtaining remote device data includes obtaining remote device data generated by said remote device based on said manipulated operating parameters. In support of that proposition, the Office Action cites Col. 9, lines 4-12 of Crater, which states that:

> . . . the monitoring engineer may select which video camera image from the images captured by the video camera bank is to be displayed, as

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> well as the length of time such display is desired. The monitoring engineer scanning the video/graphic display may decide, for example, to make an adjustment to the equipment and to check visually to ascertain whether the expected response or event has occurred at the remote machine or in the remote process in response to the adjustment.

While the cited portion of Crater describes a system in which an engineer may select a particular video camera, it does not teach the additional element of manipulating operating parameters of a remote device. For example, the cited portion of Crater does not teach obtaining operating parameters that would allow a user to "zoom-in" on an industrial control. Accordingly, Crater fails to teach or suggest the additional elements recited in Claim 15. Thus, for at least this additional reason, Claim 15 recites a combination of features neither taught not suggested by Crater. Accordingly, applicants respectfully request withdrawal of the rejection of Claim 15.

Claim 30

Claim 30 includes the element of "wherein said request to control includes two or more preselected devices, and wherein said screen interface is an integrated screen interface containing said program modules, said program modules operable to generate a graphical user interface corresponding to said requested remote device when said single screen interface is loaded on a browser application." As described above, Crater is directed at a video interface architecture for industrial control systems in which data is collected from various controllers. In this regard, Crater states at Col. 10, lines 34-38: "every controller in the system is constantly active and in communication with network 55, facilitating access by computer to any controller-based web pages . . . ." By contrast, Claim 30 includes the element of generating a graphical user interface corresponding to said requested remote device. Since the Crater system does not generate a graphical user interface based on input received from the user that identifies a remote device, Crater in no way teaches the additional elements recited in Claim 30.

CONCLUSION

Based on the above-referenced arguments, applicants respectfully submit that all pending claims of the present application are patentable, nonobvious, and allowable over the cited and applied

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references, either alone or in combination. Because the cited and applied references, either alone or in combination, fail to teach or suggest each element of the pending claims, applicants respectfully request withdrawal of the rejections of the claims and allowance of the present application.

If any questions remain, applicants request that the Examiner contact the undersigned at the telephone number listed below.

Respectfully submitted,

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